September 22, 1958

SECRET - Registered Mail   2188
Return Receipt

Dear Sir:

Per recent request of your technical monitor, we are submitting our pro-
posal for the fabrication of fifteen (15) TEM units. These units will be
the same as the prototype now in your possession.

We propose to perform this work on a cost-plus-fixed-fee, one year contract.
As shown in attached cost estimate sheet, we expect to incur expenses in
the amount of $31,440.42.

Very truly yours,

RGS/cr

~~SECRET~~

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COST ESTIMATE

15 TEM DEVICES

Purchase parts and materials................................   25X1

Project Engineering Labor, 700 hours   25X1

Technician Labor 600 hours

Model Makers, 2000 hours

Assembly-Test Labor, 1000 hours

                             25X1

Burden 25X1

G & A 25X1

Fixed Fee - 25X1

$ 31,440.42

RGS:jl

9/17/58

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P R O P O S A L

TIME EVENT MARKER

Work Statement: Fabricate and test fifteen prototype units based on designs of initial prototype unit, using techniques developed during manufacture, assembly and test of this unit.

Operational Sequence: A signal from an external source operates a stepping switch which moves through 24 contact positions, presenting at the output a serial binary coded signal representing the time in minutes since the device was started. The stepping switch is driven by a transistorized multivibrator circuit operating a solenoid driven ratchet. The binary code is picked up by the stepping switch from three calendar discs which are solenoid operated, and receive their time base from a watch. A detailed description of operation is given in Appendix I.

Specification: Running Time: 60 Day Calendar Run 1440 TEM readouts.

                Power Source: External battery supply of 5.5 to 6.5 volts. Manually wound mainspring.

                Initiation of Readout: Negative 6 volts - minimum duration 40 milliseconds and maximum duration 2 seconds.

                Excitation for readout: 1000 cycles A.C., 6 volts peak to peak, or 6 volts D.C. (These are recommended, but other frequencies and voltages can be used).

Environment	Storage	Operating
Temperature	-40° $+70^{\circ}C$	-30° $+70^{\circ}C$
Humidity	100% R.H. 4 hours	100% R.H.

Reports: Bi-monthly reports will be written covering the progress of the work. A final report summarizing the work, relating conclusions and recommendations will also be written. Five copies of each report will be submitted.

Operating instructions: Fifteen sets of operating instructions will be submitted.

RD- 76
T.C. - C

IN-7.

6645- M00 -2667

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<u>Work Schedule:</u>   We propose to build the test sixteen prototype units and
to furnish a final engineering report, within nine months
of the date of the contract.

We plan to build the first model in three months, but there
will be considerable fabrication of parts for the fifteen
units during this same period so that the effort will be
divided.over the nine months period, and not concentrated
during the last six months.

cr
9/22/58